Complete Summary

GUIDELINE TITLE

Screening for carotid artery stenosis: U.S. Preventive Services Task Force recommendation statement.

BIBLIOGRAPHIC SOURCE(S)

U.S. Preventive Services Task Force. Screening for carotid artery stenosis: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med 2007 Dec 18;147(12):854-9. [20 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

This release updates a previously published guideline: U.S. Preventive Services Task Force. Guide to clinical preventive services. 2nd ed. Baltimore (MD): Williams & Wilkins; 1996. Chapter 4, Screening for asymptomatic carotid artery stenosis. p. 53-61. [58 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Carotid artery stenosis

GUIDELINE CATEGORY

Prevention
Screening

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Nursing
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To summarize the U.S. Preventive Services Task Force (USPSTF) recommendations and supporting scientific evidence on screening for carotid artery stenosis
- To update the 1996 USPSTF recommendations on screening for carotid artery stenosis

TARGET POPULATION

Adults without neurologic signs or symptoms, including a history of transient ischemic attacks or stroke

INTERVENTIONS AND PRACTICES CONSIDERED

Note: The following was considered but not recommended:

Routine screening for carotid artery stenosis using duplex ultrasonography or other screening tests

MAJOR OUTCOMES CONSIDERED

Key Question 1: Is there direct evidence that screening adults with ultrasound for asymptomatic carotid artery stenosis (CAS) reduces fatal and/or nonfatal stroke?

Key Question 2: What is the accuracy and reliability of ultrasound to detect clinically important CAS?

Key Question 3: For people with asymptomatic CAS 60% to 99%, does intervention with carotid endarterectomy (CEA) reduce CAS-related morbidity or mortality?

Key Question 4: Does screening or CEA for asymptomatic CAS 60% to 99% result in harm?

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): A targeted review of the literature was prepared by the Agency for Healthcare Research and Quality (AHRQ) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Availability of Companion Documents" field).

This review updates the 1996 USPSTF review of screening for carotid artery stenosis (CAS), focusing on duplex ultrasound as the screening test (with various confirmatory tests) and carotid endarterectomy (CEA) as the treatment for clinically important CAS. Medical interventions and screening with carotid auscultation were not reviewed in this report. The USPSTF has reviewed screening for several known risk factors of carotid artery stenosis and stroke, including hyperlipidemia, hypertension, aspirin prophylaxis, and smoking. The evidence reports and recommendations are available at the AHRQ website at www.preventiveservices.ahrq.gov.

An analytic framework was developed for this review following USPSTF methods and is shown in Figure 1 in the evidence synthesis (see "Availability of Companion Documents" field). The USPSTF developed 4 key questions (KQ) from the analytic framework to guide its consideration of the benefits and harms of screening with ultrasound for CAS (see "Major Outcomes Considered" field).

The USPSTF designated three key questions (1-3) as subsidiary questions for which they requested non-systematic reviews to assist them in updating their recommendations. KQ4 was the only key question for which the USPSTF requested a systematic evidence review.

Data Sources and Searches

AHRQ staff searched for English language literature published January 1, 1994 to April 2, 2007 in MEDLINE that addressed key questions 1, 2, and 3. In addition additional studies were identified through the reference lists of major review articles and through consultations with experts. For key question 3, AHRQ staff performed a MEDLINE search for randomized controlled trials (RCTs), systematic reviews, and meta-analyses that compared CEA with medical therapy for asymptomatic people with CAS. One in-process RCT was identified by its inclusion in a systematic review, and was included it when it was published.

For key question 4, AHRQ staff performed a systematic search for English language articles published between January 1, 1994, and April 2, 2007, through a MEDLINE search using the focused Medical Subject Heading (MeSH) terms "endarterectomy, carotid" and "outcome and process assessment." In addition a

key study from this search was selected and related articles were identified through MEDLINE. Additional studies were identified through a search of the Cochrane database, through discussions with experts, and by hand-searching of reference lists from major review articles and studies.

Study Selection

Titles and abstracts of articles retrieved for KQ1-3 were non-systematically selected and reviewed by two reviewers. The process was considered non-systematic because articles were selected for review and abstracted by one reviewer. Articles for KQ1 were selected for inclusion if they were RCTs, compared screened versus non-screened groups, used ultrasound, magnetic resonance angiography (MRA), or computed tomography as screening modalities, reported outcomes of strokes or death in asymptomatic subjects, and were performed in a population generalizable to U.S. For KQ2, the authors included systematic reviews that compared screening tests (Ultrasound, MRA, or computed tomography screening) to angiography in asymptomatic subjects and were performed in a population generalizable to U.S. Articles for KQ3 were selected for inclusion if they were RCTs of CEA comparing surgical treatment to medical treatment, reported 30-day complication rates (stroke and death) of CEA, included only asymptomatic patients, and were performed in a population generalizable to the U.S.

For KQ4, three reviewers independently reviewed the abstracts and selected articles from titles and abstracts based on inclusion and exclusion criteria. In general, studies were selected if they were large, multi-institution, prospective studies that reported 30-day mortality/stroke outcomes for asymptomatic patients undergoing CEA. Studies were excluded if they did not report outcomes by symptomatic status, included patients receiving CEA combined with other major surgeries, were not performed in the U.S., included patients with restenosis, or were studies of patient populations at extremely high risk. Detailed search terms and inclusion/exclusion criteria are described in Appendix 1 of the Evidence Synthesis (see "Availability of Companion Documents" field). Abstracts that were selected by fewer than three reviewers were discussed and selected based on consensus.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

I: Properly conducted randomized controlled trial (RCT)

II-1: Well-designed controlled trial without randomization

II-2: Well-designed cohort or case-control analytic study

II-3: Multiple time series with or without the intervention; dramatic results from uncontrolled experiments

III: Opinions of respected authorities, based on clinical experience; descriptive studies or case reports; reports of expert committees

For design-specific criteria and quality category definitions, see Appendix 2 in the Evidence Synthesis (see "Availability of Companion Documents" field).

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Data Extraction and Quality Assessment

For all citations that met the eligibility criteria, the full articles were reviewed and quality-rated independently by two reviewers. Consensus about article inclusion, content, and quality was achieved through discussion by the two reviewers; disagreements were resolved by the involvement of a third reviewer. Data on the following items were extracted from the included studies for key question (KQ)4: source population, sample size, average age, proportion white, proportion male, average degree of stenosis, and the proportion of subjects with important comorbidities, including contralateral stenosis, smoking, diabetes, hypertension, and coronary artery disease. Quality evaluations of articles for all KQs were performed using standard U.S. Preventive Services Task Force (USPSTF) methodology on internal and external validity. The quality of randomized controlled trials (RCTs) and cohort studies were evaluated on the following items: initial assembly of comparable groups, maintenance of comparable groups, important differential loss to follow-up or overall high loss to follow-up, measurements (equality, reliability, and validity of outcome measurements), clear definition of the interventions and appropriateness of outcomes. Systematic reviews and meta-analyses were evaluated on the following items: comprehensiveness of sources considered, search strategy, standard appraisal of included studies, validity of conclusions, recency and relevance. More complete criteria and definitions for USPSTF quality ratings are listed in the Appendix 2 of the Evidence Synthesis (see "Availability of Companion Documents" field).

Data Synthesis and Analysis

Data from the included studies for KQ1-3 were synthesized qualitatively in tabular and narrative format because of the non-systematic nature of the review. Data from the systematically reviewed KQ4 was also synthesized qualitatively and not quantitatively because of the different patient characteristics and varied outcome assessments. Synthesized evidence was organized by key question.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Balance Sheets
Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

When the overall quality of the evidence is judged to be good or fair, the U.S. Preventive Services Task Force (USPSTF) proceeds to consider the magnitude of net benefit to be expected from implementation of the preventive service. Determining net benefit requires assessing both the magnitude of benefits and the magnitude of harms and weighing the two.

The USPSTF classifies benefits, harms, and net benefits on a 4-point scale: "substantial," "moderate," "small," and "zero/negative."

"Outcomes tables" (similar to "balance sheets") are the USPSTF's standard resource for estimating the magnitude of benefit. These tables, prepared by the topic teams for use at USPSTF meetings, compare the condition specific outcomes expected for a hypothetical primary care population with and without use of the preventive service. These comparisons may be extended to consider only people of specified age or risk groups or other aspects of implementation. Thus, outcomes tables allow the USPSTF to examine directly how the preventive service affects benefits for various groups.

When evidence on harms is available, the topic teams assess its quality in a manner like that for benefits and include adverse events in the outcomes tables. When few harms data are available, the USPSTF does not assume that harms are small or nonexistent. It recognizes a responsibility to consider which harms are likely and judge their potential frequency and the severity that might ensue from implementing the service. It uses whatever evidence exists to construct a general confidence interval on the 4-point scale (e.g., substantial, moderate, small, and zero/negative).

Value judgments are involved in using the information in an outcomes table to rate either benefits or harms on the USPSTF's 4-point scale. Value judgments are also needed to weigh benefits against harms to arrive at a rating of net benefit.

In making its determinations of net benefit, the USPSTF strives to consider what it believes are the general values of most people. It does this with greater confidence for certain outcomes (e.g., death) about which there is little disagreement about undesirability, but it recognizes that the degree of risk people are willing to accept to avert other outcomes (e.g., cataracts) can vary considerably. When the USPSTF perceives that preferences among individuals vary greatly, and that these variations are sufficient to make the trade-off of benefits and harms a "close-call," then it will often assign a C recommendation (see the "Recommendation Rating Scheme" field). This recommendation indicates the decision is likely to be sensitive to individual patient preferences.

The USPSTF uses its assessment of the evidence and magnitude of net benefit to make recommendations. The general principles the USPSTF follows in making recommendations are outlined in Table 5 of the companion document cited below. The USPSTF liaisons on the topic team compose the first drafts of the

recommendations and rationale statements, which the full panel then reviews and edits. Recommendations are based on formal voting procedures that include explicit rules for determining the views of the majority.

From: Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

What the United States Preventive Services Task Force (USPSTF) Grades Mean and Suggestions for Practice

Grade	Grade Definitions	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer/provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer/provide this service.
C	The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is moderate or high certainty that the net benefit is small.	Offer/provide this service only if there are other considerations in support of the offering/providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality or conflicting, and the balance of benefits and harms cannot be determined.	Read "Clinical Considerations" section of USPSTF Recommendation Statement (see "Major Recommendations" field). If offered, patients should understand the uncertainty about the balance of benefits and harms.

USPSTF Levels of Certainty Regarding Net Benefit

Definition: The U.S. Preventive Services Task Force defines certainty as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF

assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

Level of Certainty	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by factors such as: • the number, size, or quality of individual studies; • inconsistency of findings across individual studies; • limited generalizability of findings to routine primary care practice; or • lack of coherence in the chain of evidence. As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.
Low	The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of: • the limited number or size of studies; • important flaws in study design or methods; • inconsistency of findings across individual studies • gaps in the chain of evidence; • findings not generalizable to routine primary care practice; or • a lack of information on important health outcomes. More information may allow an estimation of effects on health outcomes.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Peer Review. Before the U.S. Preventive Services Task Force makes its final determinations about recommendations on a given preventive service, the

Evidence-based Practice Center and the Agency for Healthcare Research and Quality send a draft evidence review to 4 to 6 external experts and to federal agencies and professional and disease-based health organizations with interests in the topic. They ask the experts to examine the review critically for accuracy and completeness and to respond to a series of specific questions about the document. After assembling these external review comments and documenting the proposed response to key comments, the topic team presents this information to the Task Force in memo form. In this way, the Task Force can consider these external comments and a final version of the systematic review before it votes on its recommendations about the service. Draft recommendation statements are then circulated for comment from reviewers representing professional societies, voluntary organizations and Federal agencies. These comments are discussed before the final recommendations are confirmed.

Comparison with Guidelines from Other Groups. Recommendations for screening from the following groups were discussed: American Heart Association/American Stroke Association, American Society of Neuroimaging, and the Society for Vascular Surgery.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The US Preventive Services Task Force (USPSTF) grades its recommendations (A, B, C, D, or I) and identifies the Levels of Certainty regarding Net Benefit (High, Moderate, and Low). The definitions of these grades can be found at the end of the "Major Recommendations" field.

Summary of Recommendations and Evidence

The USPSTF recommends against screening for asymptomatic carotid artery stenosis (CAS) in the general adult population. **This is a grade D recommendation**.

Clinical Considerations

Patient Population

This recommendation applies to adults without neurological signs or symptoms, including a history of transient ischemic attacks or stroke. If otherwise eligible, an individual who has a carotid-area transient ischemic attack should be evaluated promptly for consideration of carotid endarterectomy.

Risk Assessment

In a setting of excellent surgical care and low complication rates, screening may benefit patients who have a very high risk for stroke. It is not clear, however, how to identify people whose risk of stroke is high enough to justify screening, yet who do not also have a high risk for surgical complications. The major risk factors for CAS include older age, male sex, hypertension, smoking, hypercholesterolemia, and heart disease.

Screening Tests

Available screening and confirmatory tests (duplex ultrasonography, digital subtraction angiography, and magnetic resonance angiography) all have imperfect sensitivity and appreciable harms. Therefore, screening could lead to non-indicated surgeries that result in serious harms, including death, stroke, and myocardial infarction, in some patients.

Useful Resources

In other recommendations, USPSTF notes that adults should be screened for hypertension, hyperlipidemia, and smoking. In addition, clinicians should discuss aspirin chemoprevention for those who have an increased risk for cardiovascular disease. The evidence and recommendations on these conditions from the USPSTF are available on the Agency for Healthcare Research and Quality (AHRQ) website at www.preventiveservices.ahrq.gov.

Definitions:

What the United States Preventive Services Task Force (USPSTF) Grades Mean and Suggestions for Practice

Grade	Grade Definitions	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer/provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer/provide this service.
C	The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is moderate or high certainty that the net benefit is small.	Offer/provide this service only if there are other considerations in support of the offering/providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality or conflicting, and the balance of benefits and harms cannot be determined.	Read "Clinical Considerations" section of USPSTF Recommendation Statement (see "Major Recommendations" field). If offered, patients should understand the uncertainty about the balance of benefits and harms.

USPSTF Levels of Certainty Regarding Net Benefit

Definition: The U.S. Preventive Services Task Force defines certainty as "likelihood that the USPSTF assessment of the net benefit of a preventive service is correct." The net benefit is defined as benefit minus harm of the preventive service as implemented in a general, primary care population. The USPSTF assigns a certainty level based on the nature of the overall evidence available to assess the net benefit of a preventive service.

Level of Certainty	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Moderate	The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by factors such as: • the number, size, or quality of individual studies; • inconsistency of findings across individual studies; • limited generalizability of findings to routine primary care practice; or • lack of coherence in the chain of evidence. As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.
Low	The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of: • the limited number or size of studies; • important flaws in study design or methods; • inconsistency of findings across individual studies • gaps in the chain of evidence; • findings not generalizable to routine primary care practice; or • a lack of information on important health outcomes. More information may allow an estimation of effects on health outcomes.

CLINICAL ALGORITHM(S)

None available

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Benefits of Detection and Early Intervention

Good evidence indicates that in selected, high-risk trial participants with asymptomatic severe carotid artery stenosis (CAS), carotid endarterectomy by selected surgeons reduces the 5-year absolute incidence of all strokes or perioperative death by approximately 5%. These benefits would be less among asymptomatic people in the general population. For the general primary care population, the benefits are judged to be no greater than small.

POTENTIAL HARMS

Harms of Detection and Early Intervention

Good evidence indicates that both the testing strategy and treatment with carotid endarterectomy can cause harms. A testing strategy that includes angiography will itself cause some strokes. A testing strategy that does not include angiography will cause some strokes by leading to carotid endarterectomy in people who do not have severe coronary artery stenosis. In excellent centers, carotid endarterectomy is associated with a 30-day stroke or mortality rate of about 3%; some areas have higher rates. These harms are judged to be no less than small.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- The U.S. Preventive Services Task Force (USPSTF) makes recommendations about preventive care services for patients without recognized signs or symptoms of the target condition.
- Recommendations are based on a systematic review of the evidence of the benefits and harms and an assessment of the net benefit of the service.
- The USPSTF recognizes that clinical or policy decisions involve more considerations than this body of evidence alone. Clinicians and policy-makers should understand the evidence but individualize decision making to the specific patient or situation.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The experiences of the first and second U.S. Preventive Services Task Force (USPSTF), as well as that of other evidence-based guideline efforts, have highlighted the importance of identifying effective ways to implement clinical

recommendations. Practice guidelines are relatively weak tools for changing clinical practice when used in isolation. To effect change, guidelines must be coupled with strategies to improve their acceptance and feasibility. Such strategies include enlisting the support of local opinion leaders, using reminder systems for clinicians and patients, adopting standing orders, and audit and feedback of information to clinicians about their compliance with recommended practice.

In the case of preventive services guidelines, implementation needs to go beyond traditional dissemination and promotion efforts to recognize the added patient and clinician barriers that affect preventive care. These include clinicians' ambivalence about whether preventive medicine is part of their job, the psychological and practical challenges that patients face in changing behaviors, lack of access to health care or of insurance coverage for preventive services for some patients, competing pressures within the context of shorter office visits, and the lack of organized systems in most practices to ensure the delivery of recommended preventive care.

Dissemination strategies have changed dramatically in this age of electronic information. While recognizing the continuing value of journals and other print formats for dissemination, the Agency for Healthcare Research and Quality will make all U.S. Preventive Services Task Force (USPSTF) products available through its Web site. The combination of electronic access and extensive material in the public domain should make it easier for a broad audience of users to access U.S. Preventive Services Task Force materials and adapt them for their local needs. Online access to U.S. Preventive Services Task Force products also opens up new possibilities for the appearance of the annual, pocket-size *Guide to Clinical Preventive Services*.

To be successful, approaches for implementing prevention have to be tailored to the local level and deal with the specific barriers at a given site, typically requiring the redesign of systems of care. Such a systems approach to prevention has had notable success in established staff-model health maintenance organizations, by addressing organization of care, emphasizing a philosophy of prevention, and altering the training and incentives for clinicians. Staff-model plans also benefit from integrated information systems that can track the use of needed services and generate automatic reminders aimed at patients and clinicians, some of the most consistently successful interventions. Information systems remain a major challenge for individual clinicians' offices, however, as well as for looser affiliations of practices in network-model managed care and independent practice associations, where data on patient visits, referrals, and test results are not always centralized.

IMPLEMENTATION TOOLS

Foreign Language Translations
Patient Resources
Personal Digital Assistant (PDA) Downloads
Pocket Guide/Reference Cards
Tool Kits
Wall Poster

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

U.S. Preventive Services Task Force. Screening for carotid artery stenosis: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med 2007 Dec 18;147(12):854-9. [20 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1996 (revised 2007)

GUIDELINE DEVELOPER(S)

United States Preventive Services Task Force - Independent Expert Panel

GUIDELINE DEVELOPER COMMENT

The U.S. Preventive Services Task Force (USPSTF) is a federally-appointed panel of independent experts. Conclusions of the U.S. Preventive Services Task Force do not necessarily reflect policy of the U.S. Department of Health and Human Services (DHHS) or its agencies.

SOURCE(S) OF FUNDING

United States Government

GUIDELINE COMMITTEE

U.S. Preventive Services Task Force (USPSTF)

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

*Task Force Members**: Ned Calonge, MD, MPH, Chair, USPSTF (Chief Medical Officer and State Epidemiologist, Colorado Department of Public Health and Environment, Denver, CO); Diana B. Petitti, MD, MPH, Vice-chair, USPSTF (Department of Preventive Medicine, Keck School of Medicine, University of Southern California, Sierra Madre, CA); Thomas G. DeWitt, MD (Carl Weihl Professor of Pediatrics and Director of the Division of General and Community Pediatrics, Department of Pediatrics, Children's Hospital Medical Center, Cincinnati, OH); Leon Gordis, MD, MPH, DrPH (Professor, Epidemiology Department, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD); Kimberly D. Gregory, MD, MPH (Director, Women's Health Services Research and Maternal-Fetal Medicine, Department of Obstetrics and Gynecology, Cedars-Sinai Medical Center, Los Angeles, CA); Russell Harris, MD, MPH (Professor of Medicine, Sheps Center for Health Services Research, University of North Carolina School of Medicine, Chapel Hill, NC); Kenneth W. Kizer, MD, MPH (President and CEO, National Quality Forum, Washington, DC); Michael L. LeFevre, MD, MSPH (Professor, Department of Family and Community Medicine, University of Missouri School of Medicine, Columbia, MO); Carol Loveland-Cherry, PhD, RN (Executive Associate Dean, Office of Academic Affairs, University of Michigan School of Nursing, Ann Arbor, MI); Lucy N. Marion, PhD, RN (Dean and Professor, School of Nursing, Medical College of Georgia, Augusta, GA); Virginia A. Moyer, MD, MPH (Professor, Department of Pediatrics, University of Texas Health Science Center, Houston, TX); Judith K. Ockene, PhD (Professor of Medicine and Chief of Division of Preventive and Behavioral Medicine, University of Massachusetts Medical School, Worcester, MA); George F. Sawaya, MD (Associate Professor, Department of Obstetrics, Gynecology, and Reproductive Sciences and Department of Epidemiology and Biostatistics, University of California, San Francisco, CA); Albert L. Siu, MD, MSPH (Professor and Chairman, Brookdale Department of Geriatrics and Adult Development, Mount Sinai Medical Center, New York, NY); Steven M. Teutsch, MD, MPH (Executive Director, Outcomes Research and Management, Merck & Company, Inc., West Point, PA; and Barbara P. Yawn, MD, MSc (Director of Research, Olmstead Research Center, Rochester, MN)

**Members of the Task Force at the time this recommendation was finalized. For a list of current Task Force members, go to www.ahrq.gov/clinic/uspstfab.htm.*

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

The U.S. Preventive Services Task Force has an explicit policy concerning conflict of interest. All members disclose at each meeting if they have an important financial conflict for each topic being discussed. Task Force members with conflicts can participate in discussions about evidence, but members abstain from voting on recommendations about the topic in question.

From: Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

Note: Dr. Teutsch was recused from the discussion and vote on this issue.

GUIDELINE STATUS

This is the current release of the guideline.

This release updates a previously published guideline: U.S. Preventive Services Task Force. Guide to clinical preventive services. 2nd ed. Baltimore (MD): Williams & Wilkins; 1996. Chapter 4, Screening for asymptomatic carotid artery stenosis. p. 53-61. [58 references]

GUIDELINE AVAILABILITY

Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site and from the Annals of Internal Medicine Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

Evidence Reviews:

- Wolff T, Guirguis-Blake J, Miller T, Gillespie M, Harris R. Screening for asymptomatic carotid artery stenosis. Evidence synthesis no. 50. AHRQ Publication No. 08-05120-EF-1. Rockville (MD): Agency for Healthcare Research and Quality, 2007 Dec. Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site and the Annals of Internal Medicine Web site.
- Screening for carotid artery stenosis: clinical summary of U.S. Preventive Services Task Force recommendations. Rockville (MD): Agency for Healthcare Research and Quality, 2007. Electronic copies: Available from the USPSTF Web site.

Background Articles:

- Barton M et al. How to read the new recommendation statement: methods update from the U.S. Preventive Services Task Force. Ann Intern Med. 2007;147:123-127.
- Guirguis-Blake J et al. Current processes of the U.S. Preventive Services Task Force: refining evidence-based recommendation development. Ann Intern Med. 2007;147:117-122. [2 references]
- Sawaya GF et al., Update on the methods of the U.S. Preventive Services Task Force: estimating certainty and magnitude of net benefit. Rockville (MD): Agency for Healthcare Research and Quality, 2007 Dec.
- Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

Electronic copies: Available from U.S. Preventive Services Task Force (USPSTF) Web site.

The following is also available:

- The guide to clinical preventive services, 2008. Recommendations of the U.S. Preventive Services Task Force. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ), 2007. 241 p. Electronic copies available from the AHRQ Web site.
- A step-by-step guide to delivering clinical preventive services: a systems approach. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ), 2002 May. 189 p. Electronic copies available from the AHRQ Web site. See the related QualityTool summary on the Health Care Innovations Exchange Web site.

Print copies: Available from the Agency for Healthcare Research and Quality Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

The Electronic Preventive Services Selector (ePSS), available as a PDA application and a web-based tool, is a quick hands-on tool designed to help primary care clinicians identify the screening, counseling, and preventive medication services that are appropriate for their patients. It is based on current recommendations of the USPSTF and can be searched by specific patient characteristics such as age, sex, and selected behavioral risk factors.

PATIENT RESOURCES

The following are available:

- Men: Stay Healthy at Any Age – Checklist for Your Next Checkup. Rockville (MD): Agency for Healthcare Research and Quality. AHRQ Pub. No. 07-IP006-A. February 2007. Electronic copies: Available from the USPSTF Web site.
- Women: Stay Healthy at Any Age – Checklist for Your Net Checkup. Rockville (MD): Agency for Healthcare Research and Quality. AHRQ Pub. No. 07-IP005-A. February 2007. Electronic copies: Available from the USPSTF Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to http://www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

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